
फ्लेवर्ड दूध — विशिष्टि
(पहला पुनरीक्षण)

Flavoured Milk — Specification
(First Revision)

ICS 67.100.10

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FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Dairy Products and Equipment Sectional Committee had been approved by the Food and Agriculture Division Council.

Conversion of milk into flavoured milk is a recognized form of its marketing. The product is similar to pasteurized milk or sterilized milk except that it is flavoured and sweetened to taste. Manufacture of the product fits in with the routine milk handling and processing procedures in the dairy. This standard was first published in 1968 to help the dairies in controlling the quality and also for guiding other dairies in taking up the production of flavoured milk.

The first revision has been undertaken to harmonize the standard with the FSSAI Regulations and the major changes include:

- a) Inclusion of UHT sterilized flavoured milk as a category of flavoured milk;
- b) Alignment of chemical and microbiological requirements with the standards of pasteurized milk (IS 13688) and sterilized /UHT sterilized milk (IS 4238) as the case may be; and
- c) Packaging materials that may be used for packaging of flavoured milk has been specified.

In the formulation of this standard, due consideration has been given to the *Food Safety and Standards Act*, 2006 and Regulations framed thereunder; the *Legal Metrology Act*, 2009 and Rules framed thereunder and the *Essential Commodities Act*, 1955. However, this standard is subject to restrictions imposed under these, wherever applicable.

The composition of the Committee responsible for formulation of the standard is given in Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding-off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

FLAVOURED MILK — SPECIFICATION

(*First Revision*)

1 SCOPE

This standard prescribes the types, the requirements and the methods of sampling and test for flavoured milk.

2 REFERENCES

The following standards listed below contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
1165 : 2002	Milk powder (<i>fifth revision</i>)
1392 : 1999	Glass milk bottles (<i>fourth revision</i>)
1479	Methods of test for dairy industry
(Part 1) : 2016	Rapid examination of milk (<i>first revision</i>)
(Part 3) : 1977	Bacteriological analysis of milk (<i>first revision</i>)
2491 : 2013	Food hygiene — General principles — Code of practice (<i>third revision</i>)
4238 : 2020	Sterilized and ultra-high temperature sterilized milk — Specification (<i>first revision</i>)
4251 : 1967	Quality tolerances for water for processed food industry
5567 : 1970	Specification for bottles for sterilized milk
7768 : 1975	Sensory evaluation of milk
9396	Specification for round open top sanitary cans for foods and drinks
(Part 1) : 1987	Tinplate (<i>first revision</i>)
(Part 2) : 2012	Sizes and general requirements (<i>second revision</i>)
10500 : 2012	Drinking water — Specification (<i>second revision</i>)

IS No.

Title

10910 : 1984	Specification for polypropylene and its copolymers for its safe use in contact with foodstuffs, pharmaceuticals and drinking water
11546 : 2012	Milk and milk products — Guidance on sampling (<i>second revision</i>)
11805 : 2007	Polyethylene pouches for packaging liquid milk (<i>second revision</i>)
12252 : 2017	Polyalkylene terephthalates (PET and PBT), their copolymers and list of constituents in raw materials and end products for their safe use in contact with foodstuffs and pharmaceuticals (<i>first revision</i>)
13334	Skimmed milk powder
(Part 1) : 2014	Standard grade (<i>second revision</i>)
(Part 2) : 2014	Extra grade (<i>first revision</i>)
13688 : 2020	Packaged pasteurized milk — Specification (<i>second revision</i>)
13689 : 1992	Butter oil (butter fat)
13690 : 1992	Pasteurized butter
14407 : 1996	Aluminium cans for beverages — Specification

3 DESCRIPTION

3.1 Flavoured milk is the product prepared from milk or other products derived from milk, or both, and edible flavourings with or without addition of sugar, nutritive sweeteners, other non-dairy ingredients including stabilisers and food colours.

3.2 Types

Flavoured milk shall be of the following types based on the heat treatment to which it is subjected:

- a) *Pasteurized Flavoured Milk* — Pasteurization shall be carried out as defined in IS 13688.
- b) *Sterilized Flavoured Milk* — Sterilization shall be carried out as defined in IS 4238.

- c) *UHT Sterilized Flavoured Milk* — UHT Sterilization shall be carried out as defined in IS 4238.

4 REQUIREMENTS

4.1 Flavoured milk, pasteurized or sterilized or UHT Sterilized, may be prepared from any of the types of milk as defined in IS 13688 and shall conform to the minimum percentage of milk fat and milk solids not fat as that of the type of milk from which it is prepared or processed.

4.2 Raw Milk Quality

Milk intended for production of flavoured milk shall be wholesome and shall be free from any added extraneous matter. It shall be tested for the presence of any preservatives, neutralizers and adulterants [see IS 1479 (Part 1)]. Milk shall also be evaluated for organoleptic requirements (see IS 7768), temperature, acidity, bacterial load, so that these parameters can serve as guidelines to the processors for continual improvement in the quality. For production of flavoured milk, milk with methylene blue reduction (MBRT) time of not less than 60 min in summer and 90 min in winter shall be accepted for processing whereas for production of Sterilized/UHT Sterilized flavoured milk, milk with MBRT time of not less than 120 min and with a negative alcohol test shall be accepted for processing. The MBRT test shall be conducted as per IS 1479 (Part 1) and results interpreted as per IS 1479 (Part 3). The alcohol test shall be conducted as per IS 1479 (Part 1).

4.3 Dairy based Ingredients

Dairy based ingredients like milk, concentrated milk, cream, whole milk powder (conforming to IS 1165), skimmed milk powder [conforming to IS 13334 (Part 1) or IS 13334 (Part 2)], butter (conforming to IS 13690) and butter oil (conforming to IS 13689) may be used.

4.4 Non-dairy Ingredients

These include:

- Sugar or other nutritive sweeteners or both conforming to relevant Indian Standards;
- Other non-dairy ingredients like nuts (whole, fragmented or ground), cocoa solids, chocolate, coffee, fruits and vegetables and products thereof including juices, purees, pulps, preparations and preserves derived therefrom, cereals, and cereal products and cereal based extracts, honey, spices, condiments, salt, and other permitted natural flavouring foods and flavour; and
- Potable water for use in reconstitution or recombination (conforming to IS 10500). However, water used for steam generation for use in direct injection steam plant shall conform to IS 4251.

4.5 The product shall have no off-flavours. No visible sediment of the added flavouring materials is desirable.

4.6 Pasteurized flavoured milk shall conform to the requirements for pasteurized milk as given in Table 1 and Table 2 of IS 13688. Sterilized/UHT sterilized flavoured milk shall conform to the requirements for pasteurized milk as given in Table 1 of IS 4238.

4.7 Hygienic Requirements

The product shall be processed, packed stored and distributed under strict hygienic conditions as prescribed in IS 2491.

4.8 The product may contain permitted food additives within the limits as specified under the *Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011*.

5 PACKING AND MARKING

5.1 Packing

5.1.1 Pasteurized flavoured milk shall be packed in clean, sound and sanitary containers made of glass (see IS 1392) or polyethylene pouches (conforming to IS 11805), properly sealed so as to prevent leakage and contamination.

5.1.2 Sterilized flavoured milk shall be packed in clean, sound and sanitary glass bottles (see IS 5567) or bottles made of polypropylene conforming to IS 10910 or Poly ethylene terephthalate conforming to IS 12252 or cans [conforming to IS 9396 (Parts 1 and 2) or IS 14407] properly sterilized and stored in such a way as to protect it from contamination and deterioration.

5.1.3 UHT sterilized flavoured milk shall be packed under aseptic conditions in a sterile package and hermetically sealed so as to retain the quality attributes and prevent ingress of external agents (air/water/microbes/particulate matter etc.) as long as the structural and seal integrity are maintained. The packing material shall retain the required aseptic conditions throughout the storage duration.

5.2 Marking

5.2.1 The following information shall be marked legibly and indelibly on each container/pouch:

- Name of the material 'Pasteurized/Sterilized/UHT sterilized flavoured milk';
- Type of milk as applicable;
- Batch or code number;
- Date of packing and/or time;
- Name of the manufacturer or processor;
- Net volume, in ml or litre;
- Best before or use by date -----;

- h) Fat ----- percent, solid-not-fat ----- percent;
- j) Storage conditions and temperature; and
- k) Any other requirements under the *Food Safety and Standards (Packaging and Labelling) Regulations, 2011* and the *Legal Metrology Act, 2009* and Rules framed thereunder.

5.2.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity

assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.

6 SAMPLING

Representative samples of flavoured milk shall be drawn, handled, stored and tested for conformity to this standard by the method prescribed in IS 11546.

ANNEX A*(Foreword)***COMMITTEE COMPOSITION**

Dairy Products and Equipment Sectional committee, FAD 19

<i>Organization</i>	<i>Representative(s)</i>
National Dairy Research Institute, Karnal	DR MANMOHAN SINGH CHAUHAN (Chairman)
All India Food Processors Association, New Delhi	DR K. L. GABA MR VIJAY GAUR (<i>Alternate I</i>) MR SANTASH KUMAR (<i>Alternate II</i>)
Bihar State Cooperative Milk Producers' Federation Ltd, (COMPFED), Delhi	MR SUSHIL KUMAR MR RUPESH RAJ (<i>Alternate</i>)
CONCERT, Chennai	MR K. RAMACHANDRAN MR M. R. KRISHNAN (<i>Alternate</i>)
Confederation of Indian Food Trade & Industry, New Delhi	MS PRIYANKA GUPTA DR ANIRUDHA CHHONKAR (<i>Alternate</i>)
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SCIENTIST 'D' (FAD), BIS

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This Indian Standard has been developed from Doc No.: FAD 19 (16152).

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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Published by BIS, New Delhi